

REMARKS

Claims 1 to 20 remain pending.

§ 103 Rejections

Claims 1 to 5, 16, and 17

The Examiner rejected claims 1 to 5, 16, and 17 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,215,812 ("Masaki") in combination with U.S. Patent App. Pub. No. 2004/0028271 ("Pollard et al.") and U.S. Patent No. 7,149,325 ("Pavlidis et al.").

Claim 1

Addressing claim 1, the Examiner cited Masaki for disclosing the first, the second, and the third claim elements, Pollard et al. for disclosing the fourth and the fifth claim elements, and Pavlidis et al. for disclosing the first, the second, and the third claim elements. Applicant respectfully traverses.

Masaki

The first and the second claim elements of claim 1 recite generating two histograms from overlapping regions of two images. The Examiner argued that Fig. 5 of Masaki discloses the same. However, Fig. 5 of Masaki shows generating a histogram from an image based on the values of product P determined from hue H and saturation S of the pixels in the image, and generating another histogram from the same image based on the values of product Q determined from hue H and lightness L of the pixels in the image. Maskai, col. 7, lines 15 to 21. Thus, Fig. 5 does not show histograms of two regions, let along overlapping regions of two images.

The third claim element of claim 1 recites determining corresponding pixels from the two histograms. The Examiner argued that step 51 in Fig. 4 of Masaki discloses the same. However, step 51 in Fig. 4 of Masaki discloses calculating a variance value Sp from the P histogram and a variance value Sq from the Q histogram, and comparing variance values Sp and Sq to respective thresholds. Maskai, col. 7, line 64 to col. 8, line 26.

Pollard et al.

The fourth claim element of claim 1 recites determining at least one parameter for an optoelectronic conversion function (OECF) that best matches the corresponding pixels in the two regions. The Examiner argued that a pre-processing step 92 in the flowchart of Fig. 12 and paragraph [0108] of Pollard et al. disclose the same. However, paragraph [0108] of Pollard et al. only discloses that pre-processing step 92 includes performing a correction of the OECF of a camera sensor. It does not disclose determining any parameter of the OECF that best matches corresponding pixels in the two regions.

The fifth claim element of claim 1 recites color matching the images by applying the OECF to one of the images. The Examiner argued that a post-processing step 96 in the flowchart of Fig. 12 and paragraph [0108] of Pollard et al. disclose the same. However, paragraph [0108] of Pollard et al. discloses applying post-processing step 96 to perform exposure correction and transform the pixel values to a standard color space (e.g., RGB). It does not disclose applying the OECF to one of two images to color match the images.

Pavlidis et al.

The preamble of claim 1 recites color matching first and second images that have overlapping regions. The Examiner argued that Fig. 16A and 16B of Pavlidis et al. are the recited first and second images. Fig. 16A shows a reference image 314 of a background, and Fig. 16B shows an object image 315 with a person as a foreground against the same background. Pavlidis et al., col. 18, line 55 to 19, line 10. The differences between the preamble of claim 1 and Figs. 16A and 16B will become apparent in the discussion of the first and the second claim elements hereafter.

The first and the second claim elements of claim 1 recite generating two histograms from overlapping regions of two images. The Examiner argued that Figs. 17A and 17B and col. 26, line 25 of Pavlidis et al. disclose the same. However, Fig. 17A is a histogram 323 of an image 322 cropped from image 317 in Fig. 16D, and Fig. 17B is a reference histogram 351 of an image 341 stored in database 325. Pavlidis et al., col. 25, line 32 to 50; col. 26, lines 25 to 27, 36 to 38, and 64 to 66. As discussed in the preceding paragraph, the Examiner cited image 314 in Fig. 16A as the recited first image and image 315 in Fig. 16B as the recited second image. However, while histogram 323 is generated from part of image 315 in Fig. 16B that became image 317 in Fig. 16D, reference histogram 351 is not generated from image 314 in Fig. 16A. Instead, histogram 351 is generated from image 341 in database 325.

The third claim element of claim 1 recites determining corresponding pixels from the two histograms. The Examiner argued that col. 26, lines 25 to 36 of Pavlidis et al. discloses the same. However, col. 26, lines 25 to 36 of Pavlidis et al. only generally describes the histogram 323 in Fig. 17A (e.g., number of pixels of particular pixel values).

For all of the above reasons, claim 1 is patentable over Masaki, Pollard et al., and Pavlidis et al.

Claims 16

Claim 16 recites similar limitations as claim 1 and it is patentable for at least the same reasons as claim 1.

Claims 2 to 5 and 17

Claims 2 to 5 and 17 depend directly or indirectly from claim 1 or 16, and are patentable for at least the same reasons as claims 1 and 16.

Claims 6 to 8, 10 to 13, 15, 18, and 20

Claims 6 to 8, 10 to 13, 15, 18, and 20 depend directly or indirectly from claim 1 or 16, and they are patentable for at least the same reasons as claims 1 and 16.

Allowable Subject Matter

The Examiner indicated that claims 9, 14 and 19 are allowable if rewritten in independent form including all of the limitations of their base claims and any intervening claims. Applicant has not amended these claims to independent form because Applicant believes that their base claims are patentable over the cited references.

Summary

In summary, claims 1 to 20 were pending in the above-identified application when last examined. For the above reasons, Applicant respectfully requests the Examiner to withdraw the claim rejections and allow claims 1 to 20. Should the Examiner have any questions, please call the undersigned at (408) 382-0480.

Respectfully submitted,

/David C Hsia/

David C. Hsia
Attorney for Applicant(s)
Reg. No. 46,235

Patent Law Group LLP
2635 North First St., Ste. 223
San Jose, California 95134
408-382-0480x206